

AMENDMENT

In the claims:

Claim 1. (Currently amended) A transgenic plant, ~~which plant comprises~~ comprising a recombinant polynucleotide comprising ~~a nucleotide sequence selected from the group consisting of:~~

(a) a nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2, ~~or the complement thereof~~ a sequence that is fully complementary to the nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2;

(b) ~~a nucleotide sequence encoding a polypeptide comprising a conservatively substituted variant of the polypeptide of (a);~~

(c) a nucleotide sequence comprising ~~a sequence of~~ SEQ ID NO: 1, ~~or the complement thereof~~ a sequence that is fully complementary to the nucleotide sequence comprising SEQ ID NO: 1;

~~(d) a nucleotide sequence comprising silent substitutions in the nucleotide sequence of one or more of (a) or (c);~~

(e) ~~a nucleotide sequence which hybridizes under stringent conditions to the nucleotide sequence of one or more of: (a), or (b), (c), or (d), wherein the stringent conditions comprise wash conditions of 0.2 x SSC to 2.0 x SSC, 0.1% SDS at 50-65° C;~~

(f) a nucleotide sequence comprising 18 consecutive nucleotides of a sequence encoding amino acid residues 35 through 40 of SEQ ID NO:2;

(g) wherein the a nucleotide sequences comprising ~~any of either (a) -(f) or (b)~~ , which encodes a polypeptide that increases a plant's biomass as compared to a control plant not transformed with said recombinant polynucleotide;

(h) ~~a nucleotide sequence having at least 70% sequence identity to the nucleotide sequence of (f);~~

and

(i) ~~a nucleotide sequence which encodes a polypeptide having at least 78% sequence identity to a conserved domain of amino acid residues 33 through 50 of the polypeptide of SEQ ID NO:2.~~

Claim 2. (Currently amended) The transgenic plant of claim 1, further comprising a constitutive, inducible, or tissue-active promoter operably linked to the nucleotide sequence ~~comprising any~~ of (a) ~~(i)~~ or (b).

Claim 3-6. (Canceled)

Claim 7. (Withdrawn) An isolated or recombinant polypeptide comprising a subsequence of at least about 15 contiguous amino acids encoded by the recombinant or isolated polynucleotide of claim 3.

Claim 8. (Withdrawn) The isolated or recombinant polypeptide of claim 7 comprising a sequence selected from those of SEQ ID Nos. 2N, where N=1-4, or a sequence comprising a conservative substitution therein.

Claim 9. (Withdrawn) A method for producing a plant having a modified biomass, the method comprising altering the expression of the isolated or recombinant polynucleotide of claim 3 or the expression levels or activity of a polypeptide of claim 7 in a plant, thereby producing a modified plant, and selecting the modified plant for an improved plant biomass.

Claim 10. (Withdrawn) A method of identifying a factor that is modulated by or interacts with a polypeptide encoded by a polynucleotide of claim 3, the method comprising:
(a) expressing a polypeptide encoded by the polynucleotide in a plant; and
(b) identifying at least one factor that is modulated by or interacts with the polypeptide.

Claim 11. (Withdrawn) The method of claim 10, wherein the identifying is performed by detecting binding by the polypeptide to a promoter sequence, or detecting interactions between an additional protein and the polypeptide in a yeast two hybrid system.

Claim 12. (Withdrawn) The method of claim 10, wherein the identifying is performed by detecting expression of a factor by hybridization to a microarray, subtractive hybridization or differential display.

Claim 13. (Withdrawn) A method of identifying a molecule that modulates activity or expression of a polynucleotide or polypeptide of interest, the method comprising:

- (a) placing the molecule in contact with a plant comprising the polynucleotide or polypeptide encoded by the polynucleotide of claim 3; and,
- (b) monitoring one or more of: (i) expression level of the polynucleotide in the plant;
- (ii) expression level of the polypeptide in the plant; (iii) modulation of an activity of the polypeptide in the plant; or (iv) modulation of an activity of the polynucleotide in the plant.

Claim 14. (Withdrawn) A method of identifying a sequence similar or homologous to one or more polynucleotides of claim 3, or one or more polypeptides encoded by the polynucleotides, the method comprising:

- (a) providing a sequence database; and,
- (b) querying the sequence database with one or more target sequences corresponding to the one or more polynucleotides or to the one or more polypeptides to identify one or more sequence members of the database that display sequence similarity or homology to one or more of the one or more target sequences.

Claim 15. (Withdrawn) The method of claim 14, wherein the querying comprises aligning one or more of the target sequences with one or more of the one or more sequence members in the sequence database.

Claim 16. (Withdrawn) The method of claim 14, further comprising linking the one or more of the polynucleotides of claim 3, or encoded polypeptides, to a modified plant biomass.

Claim 17. (Previously presented) A plant comprising altered expression levels of the recombinant polynucleotide in the transgenic plant of claim 1.

Claim 18. (Withdrawn) A plant comprising altered expression levels or the activity of the isolated or recombinant polypeptide of claim 7.

Claim 19. (Withdrawn) A method for producing a plant having increased biomass, the method comprising altering the expression of the recombinant polynucleotide in the transgenic plant of claim 1 or the expression levels or activity of the polypeptide in the transgenic plant of claim 1 in

a plant, thereby producing a modified plant, and selecting the modified plant for increased plant biomass.

Claim 20. (Withdrawn) A method of identifying a factor that is modulated by or interacts with a polypeptide encoded by a recombinant polynucleotide in a transgenic plant, the method comprising:

- (a) expressing the polypeptide encoded by the recombinant polynucleotide in the transgenic plant of claim 1; and
- (b) identifying at least one factor that is modulated by or interacts with the polypeptide.

Claim 21. (Withdrawn) The method of claim 20, wherein the identifying is performed by detecting binding by the polypeptide to a promoter sequence, or detecting interactions between an additional protein and the polypeptide in a yeast two hybrid system.

Claim 22. (Withdrawn) The method of claim 20, wherein the identifying is performed by detecting expression of a factor by hybridization to a microarray, subtractive hybridization, or differential display.

Claim 23. (Withdrawn) A method of identifying a molecule that changes activity or expression of a polynucleotide or polypeptide of interest in a transgenic plant, the method comprising:

- (a) placing the molecule in contact with the transgenic plant of claim 1; and,
- (b) monitoring one or more of: (i) expression level of the polynucleotide of interest in the plant; (ii) expression level of the polypeptide of interest in the plant; (iii) change of an activity of the polypeptide of interest in the plant; or (iv) change of an activity of the polynucleotide of interest in the plant.

Claim 24. (Withdrawn) A plant comprising altered expression levels or the activity of the polypeptide in the transgenic plant of claim 1.

Claim 25. (New) A transgenic plant comprising a recombinant polynucleotide comprising a polynucleotide sequence that hybridizes over its full length under stringent conditions to:

- (a) a nucleotide sequence comprising SEQ ID NO: 1, or a sequence that is fully complementary to the nucleotide sequence comprising SEQ ID NO: 1; or

(b) a nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2, or a sequence that is fully complementary to the nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2;

wherein the stringent conditions comprise wash conditions of 0.2 x SSC to 2.0 x SSC, 0.1% SDS at 60-65° C.

Claim 26. (New) The transgenic plant of claim 25, further comprising a constitutive, inducible, or tissue-active promoter operably linked to the polynucleotide sequence.

Claim 27. (New) A plant comprising altered expression levels of the recombinant polynucleotide in the transgenic plant of claim 25.

Claim 28. (New) A method for producing a plant having increased biomass; said method comprising:

(a) providing an expression vector or cassette comprising a nucleotide sequence selected from the group consisting of

- (i) a nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2 or a sequence that is fully complementary to the nucleotide sequence encoding a polypeptide comprising SEQ ID NO: 2;
- (ii) a nucleotide sequence comprising SEQ ID NO: 1 or a sequence that is fully complementary to the nucleotide sequence comprising SEQ ID NO: 1; and
- (iii) a nucleotide sequence that hybridizes under stringent conditions to the nucleotide sequence of (i) or (ii), wherein the stringent conditions comprise wash conditions of 0.2 x SSC to 2.0 x SSC, 0.1% SDS at 50-65° C; and

(b) transforming a plant with the expression vector or cassette, thereby producing a plant, with increased plant biomass as compared to a control plant not transformed with the nucleotide sequences of (i), (ii) or (iii).